

A New Scenopinid Genus with Three New Species from Chile¹

(Diptera: Scenopinidae)

L. P. KELSEY

University of Delaware, Newark 19711

It has been my privilege to examine the Scenopinidae collected by Michael E. Irwin while on an extended collecting trip with Dr. Evert I. Schlinger to Chile.²

Although only a few species were collected these included one specimen of a previously described species, the second-known specimen of the rare *Heteromphrale chilensis* (Kröber) (Kelsey, 1969, p. 286). The remaining material, comprising 64 specimens, represents three species in a new genus that I take great pleasure in naming for Mr. Irwin who has contributed so much new material through his extensive collecting. Terminalia were dissected, cleared in KOH and drawn under water. All scale marks on drawings equal one-half millimeter—the shorter mark applies to the wing and head, the longer to the terminalia.

Irwiniana Kelsey, new genus

Type-species *Irwiniana irwini* Kelsey, new species. This genus, though related to the South American genus *Heteromphrale* and the North American genus *Brevitrichia*, has much closer affinities to the genus *Propebrevitrichia* from Africa and particularly to the Australian genus *Riekiella*. The females show distinct relationships indicating a common origin and a transantarctic distribution pattern; since the females of all three genera have the eighth sternite exceeding the tergum noticeably. The ninth tergites, which may or may not have stiff blunt bristles, indicate a close relation between the *Propebrevitrichia* of Africa and the *Heteromphrale* of South America, both of which possess a limited number of spines on the ninth tergite, a character also shared by the North American *Brevitrichia* which bear a larger complement of spines but differ in having an excavated eighth sternite. The new genus *Irwiniana* exhibits a closer relationship to the Australian genus *Riekiella* in lacking stout spines on the ninth tergite but differs in having the eighth sternite ending in three lobes instead of being pointed.

¹Published as Miscellaneous Publication No. 630 with the approval of the Director of the Delaware Agricultural Experiment Station. Publication No. 406 of the Department of Entomology and Applied Ecology.

²Specimens were collected under the auspices of the Universidad de Chile-University of California Cooperative Program, Ford Foundation Grant. In addition, Dr. Schlinger was on a Guggenheim Fellowship.

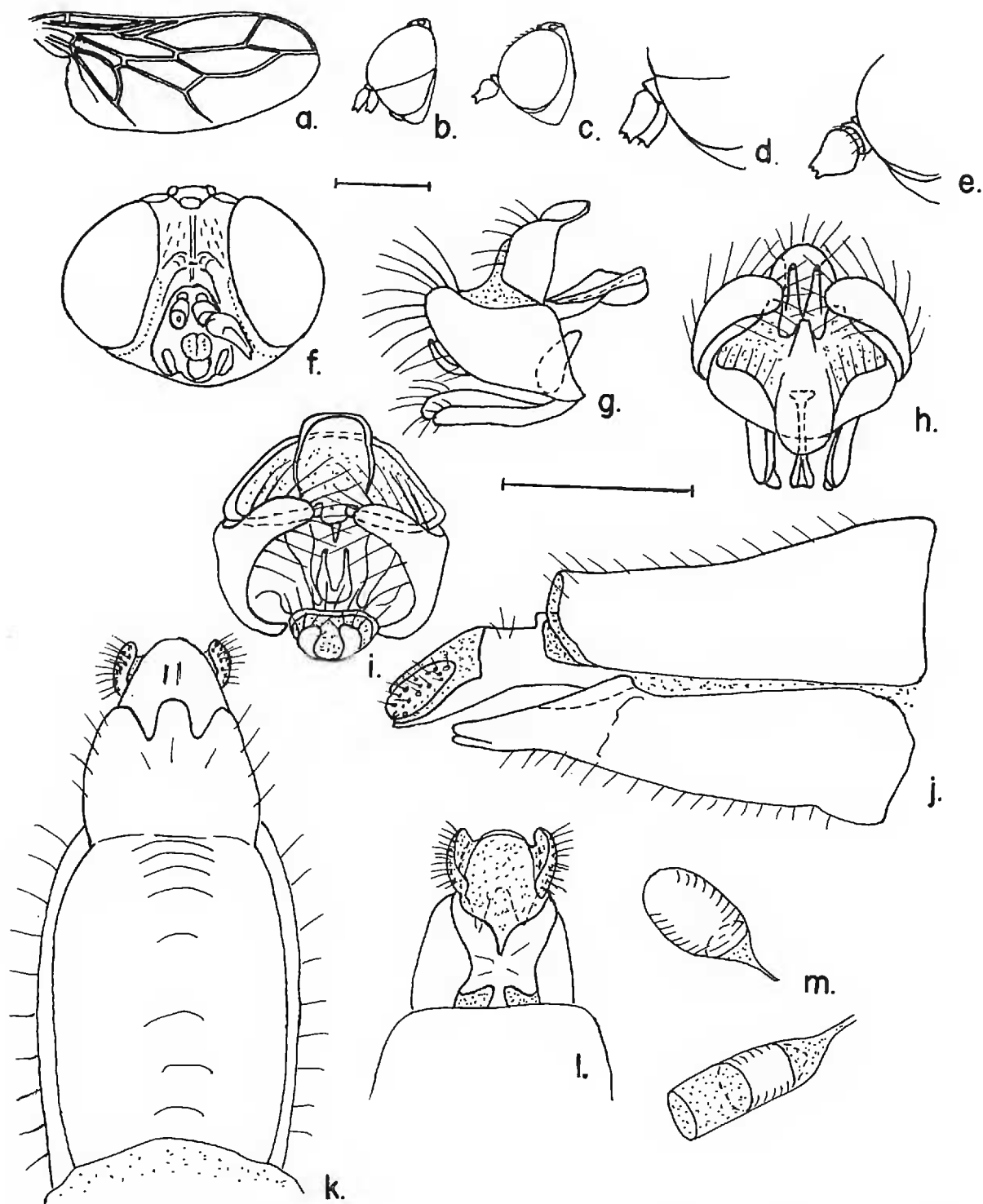


FIG. 1. *Irwiniana irwini* Kelsey, new species ♂ and ♀; a, wing; b, c, lateral aspects of male and female heads; d, e, enlarged details of male and female antennae; f, anterior aspect of female head; g, h, i, lateral, ventral (physically dorsal) and posterior aspects of male terminalia; j, k, l, lateral, ventral and dorsal aspects of female 8th and 9th segments; m, spermathecae.

The heads and antennae of all five genera are similar as are the wings with a closed stalked cell R_5 , except that *Riekiella* is somewhat variable in this character with some species having vein M_{1-2} not reaching vein R_5 or the tip of the wing in one or both sexes.

In size the members of the genera *Irwiniana*, *Propebrevitrichia* and

Riekiella are small, averaging 2–3 mm, while *Heteromphrale* is nearly twice as large, at least in the female.

The male ninth tergite is similar in shape to those of *Brevitrichia* and *Propebrevitrichia*, but does not extend as far ventrad, leaving more of the sternite exposed—the aedeagus appears as two wiry prongs of variable length which appear to contain the ejaculatory ducts. They may however actually be the aedeagal parameres and the aedeagus may be a short membranous structure hidden between them. In many Scenopinids the aedeagus is a single median sclerotized structure containing the ejaculatory duct and is flanked by two wiry aedeagal parameres indicating a more advanced development, while the condition found in *Irwiniana*, *Brevitrichia*, *Propebrevitrichia*, *Heteromphrale* and some *Riekiella* represents a more primitive state of development.

***Irwiniana irwini* Kelsey, new species**

(Fig. 1)

MALE.—Head black-brown; eyes red-brown above, black-brown below extending to back of head; frons narrow, triangular, subshining, area above antennal bases with dorsal extension of dull brown pubescence bordering oral cavity; ocellar tubercle black-brown, ocelli black-brown; mouth parts black-brown, well developed, filling oral cavity; palpi black-brown, only half as long as mouthparts; antennae black-brown, the first two segments short, third segment pear shaped, forked at tip, covered with short red-brown hairs.

Thoracic dorsum black-brown, shining, with a few sparse short hairs, a patch of gray pollen above humeral callus; humeral and supraalar calli tan; pleurum black-brown covered with gray pollen; wing milky hyaline, veins brown, lighter behind; halter stem brown, granular, knob black-brown, with tan band between upper and lower surfaces; legs black-brown lightening to brown distally.

Abdomen black-brown. Details of terminalia (Fig. 1).

FEMALE.—Head black-brown; eyes black-brown with narrow postocular rim fringed with short anteriorly directed hairs; frons broad, shining, wider than ocellar tubercle, with few sparse hairs and shallow median groove, a yellow band on lower face between eye and oral cavity; ocellar tubercle black-brown, ocelli black-brown; mouthparts and antennae as male.

Thorax as for male except wings hyaline with brown veins.

Abdomen black-brown, eighth segment black-brown basally with distal third lighter and cleft into three lobes distally (Fig. 1).

LENGTH.—Male body 2–2.3 mm., wing 1.5 mm., female body 2.6–4 mm., wing 2–2.1 mm.

Holotype male, 20.6 KM S. OF BULNES, NUBLE PROV., CHILE 75 m, 26 January 1967 (M. E. Irwin). Flying over fresh dirt from animal burrow. Type to be deposited in the University of Chile collection, Santiago. Allotype, same data as holotype. Paratypes: 47 ♂♂ and 9 ♀♀

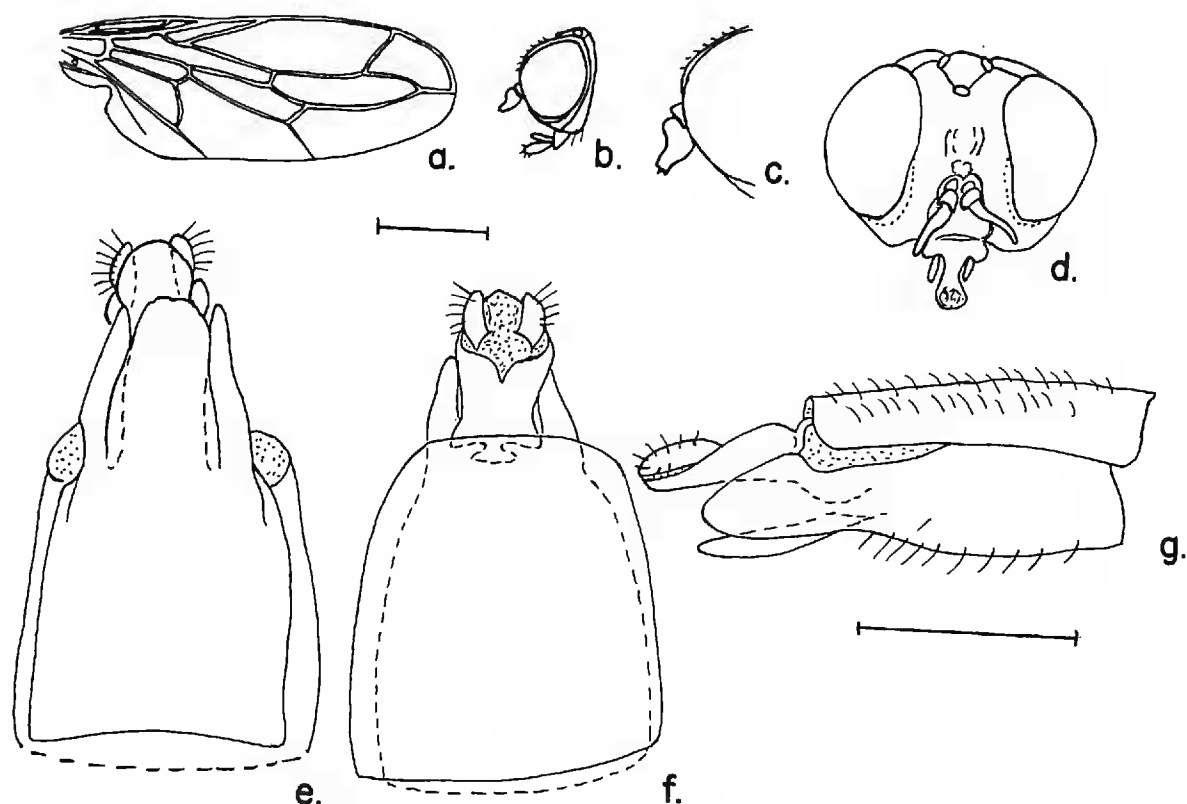


FIG. 2. *Irwiniana glabrifrons* Kelsey, new species ♀; a, wing; b, lateral aspect of head; c, enlarged detail of antennae; d, anterior aspect of head; e, f, g, ventral, dorsal and lateral aspects of female 8th and 9th segments.

deposited as follows: 2 ♂♂ 2♀♀ U.S. National Museum, 4 ♂♂ 2♀♀ retained by the author, remainder in University of California, Berkeley and University of Chile.

Irwiniana glabrifrons Kelsey, new species

(Fig. 2)

FEMALE.—Head dark red-brown; eyes tan-brown (black-brown in fresh specimen), postocular ridge moderately broad, subshining, rounded, posterior half granular, continuous with back side of head; frons broad, smooth, shining, with median depression; ocellar tubercle dark red-brown, not set off from frons, ocelli red-orange; mouthparts brown, well developed; palpi black-brown, shorter than mouthparts; orange band next to eyes laterad of oral opening; antennae black-brown, first two segments short, third segment pear-shaped, covered with short hairs, truncate at tip with median peg longer than lateral points; see figure.

Thorax black-brown, shining, few scattered posteriorly directed hairs, thin gray pollen above humeral callus and lateral margins of tergum; humeral and supraalar calli tan to cream; pleural areas black-brown covered with gray pollen scales, tan below wing; wing hyaline, veins brown; halter stem brown, knob yellow-brown broadly split laterally by band of cream-white; legs black-brown.

Abdomen black-brown, basal segment granular dorsally, distal segments shining, eighth segment red-brown, sternum trilobed (Fig. 2).

MALE.—Unknown.

LENGTH.—Female body 2.3 mm., wing 2.0 mm.

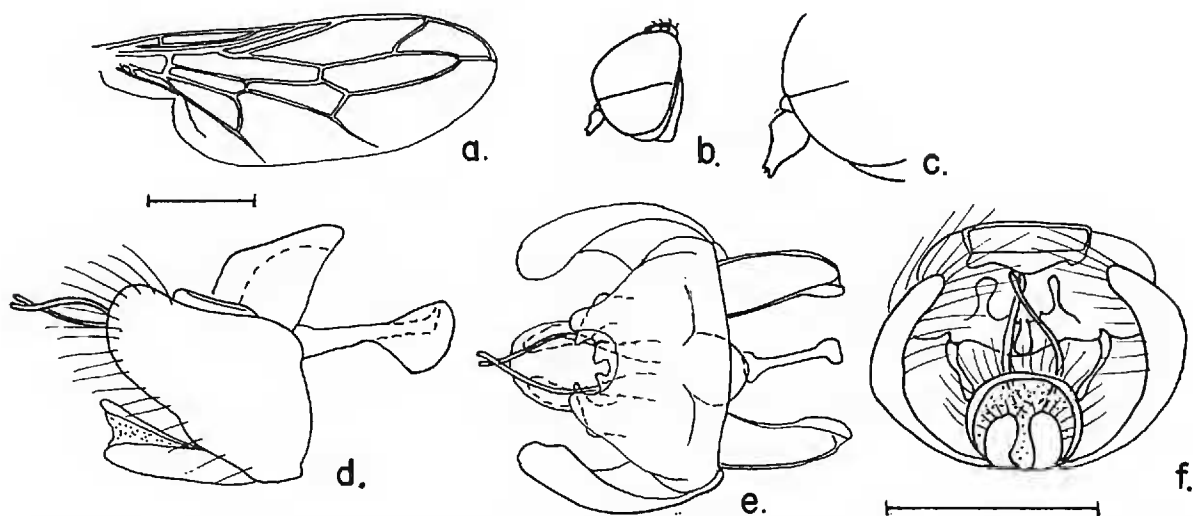


FIG. 3. *Irwiniana graciliparamera* Kelsey, new species ♂; a, wing; b, lateral aspect of head; c, enlarged detail of antennae; d, e, f, lateral, ventral (physically dorsal) and posterior aspects of male terminalia.

Holotype female, QUEBRADA LA PLATA, SANTIAGO PROV., CHILE, 510 m. 33°30' S, 70°47' W Rinconada, Maipú; Malaise trap, 26 December 1966 (M. E. Irwin). Type to be deposited in the University of Chile collection, Santiago.

***Irwiniana graciliparamera* Kelsey, new species**

(Fig. 3)

MALE.—Head black, eyes red-brown above, black-brown below, glinting reddish in certain light; frons narrow, triangular, upper half shining, lower portion dull black-brown; ocellar tubercle black-brown with some gray pollen, ocelli brown; back of head dusted with gray pollen; mouthparts black-brown, well developed, filling oral cavity; palpi black-brown, only half as long; border between oral cavity and eye margin orange; antennae black-brown, first two segments short, third segment pear shaped, hairy, ending bluntly in three subequal points with ventral point longest (Fig. 3).

Thoracic dorsum with ground color black-brown dusted with fine pollen appearing as bands of tan and black-brown longitudinal stripes and under certain light appearing shining black-brown; humeral and supraalar calli orange-brown; scutellum dusted with tan pollen; pleural areas black-brown dusted with tan pollen, kat-episternum with areas of lighter integument; wings brownish hyaline, veins brown; halter stem black-brown, knob white; legs black-brown dusted with gray pollen.

Abdominal segments 2–4 black-brown, dusted with tan pollen and separated by thin white bands; white bands between next three segments broader; ninth tergum black-brown, hairy (Fig. 3).

FEMALE.—Unknown.

LENGTH.—Male body 2.3–2.8 mm., wing 2.0–2.3 mm.

Holotype male, 10 KM E. FRAY JORGE NATIONAL PARK, COQUIMBO PROV., CHILE, 28 December 1966 (M. E. Irwin), dry wash. Type to be deposited in the University of Chile collection, Santiago. Paratypes:

4 ♂ ♂ same data, 1 ♂ U. S. National Museum, 1 ♂ my collection, 2 ♂ ♂ University of California, Berkeley.

HETEROMPHRALE CHILENSIS (Kröber)

One female .51 m. W. Vilcho, Talca Prov., Chile, 615 m, 13 January 1967 (M. E. Irwin). This specimen will be deposited in the University of Chile collection, Santiago.

LITERATURE CITED

- KELSEY, L. P. 1969. A Revision of the Scenopinidae (Diptera) of the World. U.S. Nat. Mus. Bull., 277, 336 pp., 108 Figures.

New Records of North American Tabanidae I. Species New to the Faunas of Mexico and of the United States (Diptera)

CORNELIUS B. PHILIP

California Academy of Sciences, San Francisco, 94118

Significant, though perhaps not unexpected, additions to the recently cataloged Western Hemisphere faunas of tabanid flies, Neotropical for Mexico (Fairchild, 1971) and Nearctic (Philip, 1965), have been found in recently studied collections as acknowledged below.

Abbreviations below include: California Academy of Sciences (CAS); Arizona State University (ASU); University of California, Berkeley (Calif. Insect Survey) (CIS); United States of America (US); and the author (CBP).

Apatolestes ater Brennan.—Two females taken in Baja California Norte, 17 miles inland from Ensenada at 3,200 ft., 10 July 1969, by S. C. Williams and V. F. Lee (CAS), extend previously known, sparse distribution of this species south from southern California. First Mexican record.

Silvius (Silvius) gigantulus (Loew).—Several females of this rather widespread species in western US were found in CIS collection from Baja California: 2 ♀, Melling Ranch, 26 May 1958, I. Powell; 1 ♀, Sierra San Pedro Martir, La Grulla, 6,500 ft., 28 May 1958, and 1 ♀, 5 mi. s. Socorro, 6,000 ft., 27 May 1958, both by J. Powell. First record for Mexico.

Chrysops chiriquensis Fairchild.—A series of 12 females of this Central American species was represented in the Dampf collection (CBP) from Chiapas: